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Periodic pulse testing in porous media with nonlinear permeability dependence versus pressure

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Abstract

© 2006-2018 Asian Research Publishing Network (ARPN). The filtration pressure waves propagations in nonlinear media are considered for two models pressure dependences of permeability. The differences of the amplitudes and phases hydrodynamic periodic pulse testing signals are calculated for nonlinear and analogous linear situations. These differences can reach unity and tens of percents. Obtained results can be used in correction the values of the filtration parameters.

Keywords

Nonlinear filtrationof fluids, Periodic pulse testing, Porous and fractured porous media

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